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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,315	04/28/2006	Wolfgang Fick	2003P15434WOUS	5156

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SIEMENS CORPORATION
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EXAMINER
BHARADWAJ, KALPANA

ART UNIT	PAPER NUMBER
2129	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/577,315	FICK ET AL.
		Examiner	Art Unit
		KALPANA BHARADWAJ	2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 May 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>5-12</u> is/are pending in the application.

　 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>5-12</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　 a)☐ All   b)☐ Some * c)☐ None of:

　　 1.☐ Certified copies of the priority documents have been received.

　　 2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　 3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

　 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　 Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　 Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to an AMENDMENT entered May 19, 2008 for

the patent application 10/577,315 filed on April 28, 2006.

2.   All prior office actions are fully incorporated into this Office Action by reference.

Status of Claims

3.   Claims 5-12 are pending. Claims 1-4 have been cancelled.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

4.   Claims 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Solomon

(USPN 2004/0162638, referred to as **Solomon**).

Claim 5:

Solomon teaches a method for the operation of a technical system, comprising:

recording a plurality of operating parameters of a system during a time interval

(**Solomon,** ¶ 0038: collective data acquisition); and

determining an operating or functional mode of the technical system from the temporal behavior (**Solomon,** ¶ 0037: behavior-based reactive MRS architecture) the operating parameters using artificial intelligence methods selected from the group consisting of (**Solomon,** ¶ 0025: artificial intelligence):

neuronal network (**Solomon,** ¶ 0025: artificial neural networks), fuzzy logic (**Solomon,** ¶ 0047:using fuzzy logic), combined neuro/fuzzy method (**Solomon,** ¶ 0025: artificial intelligence; robotic agents; ¶ 0047:using fuzzy logic), and genetic algorithm (**Solomon,** ¶ 0027: genetic algorithms), wherein the determining of the operating or functional mode of the technical system from the temporal behavior of the operating parameters is performed with no model of the technical system (**EN:** a 'technical system' is a model in itself).

Claim 6:

Solomon teaches the method according to claim 5, wherein an operating and a functional mode of the technical system are determined from the temporal behavior the operating parameters (**Solomon,** ¶ 0197: temporal objects) using artificial intelligence methods selected from the group consisting of:

neuronal network, fuzzy logic, combined neuro/fuzzy method, and genetic algorithm (**EN:** see claim 1 for rejection).

Claim 7:

Solomon teaches the method according to claim 5, wherein the operating parameters are recorded as data sets during a plurality of temporally separate time intervals (**Solomon**, ¶ 0031: Reprogrammable … uploaded at any time) and the data sets are compared using the artificial intelligence methods, and an adjustment of the operating parameters (**Solomon,** ¶ 0031: mission objective alteration; **EN:** 'alteration' would involve adjustment to the operating parameters) is determined in order to achieve a desired operating mode of the technical system.

Claim 8:

Solomon teaches the method according to claim 7, wherein a probability that an adjustment of the operating parameters provides for the desired operating mode is determined (**Solomon,** ¶ 0041: probabilities of winning; ¶ 0047: assess probabilities and thresholds).

Claim 9:

Solomon teaches the method according to claim 8, wherein the operating mode of the technical system is determined using a correlation analysis of the operating parameters, wherein the result of changes in operating parameters that correspond to input parameters is determined based on operating parameters which correspond to output parameters (**Solomon,** ¶ 0029: collective learning and decision making; **EN:** 'learning' is to do a correlation analysis and find the correspondence between output and input parameters to achieve a certain result).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Solomon as applied to claim 5-9 above, and further in view of Ma (USPN

2002/0136260, referred to as **Ma**).

Claim 10:

        Solomon teaches (refer to claim 1 for rejections):

        recording operating parameters of at least part of a system during a time interval;

        determining an operating mode or functional mode of the technical system from

the temporal behavior the operating parameters using artificial intelligence methods

selected from the group consisting of:

        neuronal network, fuzzy logic, combined neuro/fuzzy method, and genetic

algorithm, wherein the determining of the operating of functional mode of the technical

system from the temporal behavior the operating parameters is performed with no

model of the technical system;

Solomon does not teach the method of controlling the operation of a power station,

comprising:

assigning a fingerprint to the operating parameter by the artificial intelligence method;

comparing the fingerprint to a predetermined fingerprint; and adjusting the operating parameters of the power station in order to achieve a desired operation of the power station.

However, Ma teaches teach the method of controlling the operation of a power station, comprising (**Ma, ¶** 0006: power stations):

assigning a fingerprint to the operating parameter by the artificial intelligence method (**Ma, ¶** 0051: characteristic signatures; variation patterns; **EN:** 'signatures' using patterns, is to fingerprint by the AI method);

comparing the fingerprint to a predetermined fingerprint (**Ma, ¶** 0051: compared against stored values); and adjusting the operating parameters of the power station in order to achieve a desired operation of the power station (**Ma, ¶** 0051: regulates … in a mode that is appropriate; **EN:** 'regulating' is to adjust).

Solomon and Ma are from the same field of endeavor, controlling parameters. It would have been obvious to one of ordinary skill in the art to have modified Solomon's grouping of mobile agents with predetermined signatures, for the benefit of a controller being able to predict the onset of several conditions (**Ma, ¶** 0051).

Claim 11:

Solomon modified by Ma teaches the method according to claim 10, wherein a probability that an adjustment of the operating parameters provides for the desired

operating mode is determined (**Solomon,** ¶ 0041: probabilities of winning; ¶ 0047:

assess probabilities and thresholds).

Claim 12:

Solomon modified by Ma teaches the method according to claim 11, wherein the

operating mode of the power station is determined using a correlation analysis of the

operating parameters, wherein the result of changes in operating parameters that

correspond to input parameters is determined based on operating parameters which

correspond to output parameters (**Solomon,** ¶ 0029: collective learning and decision

making; **EN:** 'learning' is to do a correlation analysis and find the correspondence

between output and input parameters to achieve a certain result).

Response to Argument

7.   Applicant's arguments filed May 19, 2008 have been fully considered but they are

not persuasive.

8.   Regarding Applicant's arguments on page 5-6:

Solomon fails to describe or suggest that the determining of the operating or

functional mode of the technical system is performed with <u>no model</u> of the technical

system.

<u>Examiner's response:</u>

A 'technical system' is a model in itself. In the applicant's invention, the technical system refers to a power station system. Therefore, power station model is inherently present. Further, if the applicant is trying to imply that he uses 'no <u>formal model</u>' of the system, then this should be explicitly stated. The examiner finds no mention of 'formal models' or the lack of 'formal models' in the claims and/or the specification. Also, the applicant claims a method performed with 'no model' and yet uses 'neural networks'. A 'neural network' is a well known model in AI. Therefore, there is indeed an underlying model present in the applicant's invention.

Examination Considerations

9.   Examiner has cited particular columns and line numbers or paragraph numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. The entire reference is considered to provide disclosure relating to the claimed invention.

Conclusion

10.   Claims 5-12 stand rejected.

11.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KALPANA BHARADWAJ whose telephone number is

(571)270-1641. The examiner can normally be reached on Monday-Friday 7:30am 5:00

pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Vincent can be reached on (571) 272-3080. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bharadwaj Kalpana/
Examiner, Art Unit 2129
/David R Vincent/
Supervisory Patent Examiner, Art Unit 2129